Convention on the Conservation of Migratory Species of Wild Animals (CMS) Background Guide

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The Convention on the Conservation of Migratory Species of Wild Animals (CMS) was established in 1979 due to the growing fears of the damage of the modern world to migratory species.[1] Spanning across international borders, migratory species face a wide range of threats, which include a rapidly shrinking environment, hunting and trafficking, and the eradication of their ecosystems. The CMS was imbued with the mandate of facilitating cooperation amongst countries to sustainably manage species of wild animals and their habitats, through coordinating agreements and actions. More than merely the animals themselves, the CMS believes that protecting the habitats the animals live in is crucial to the longer term survival of the species as a whole.

As the CMS (Convention on the Conservation of Migratory Species of Wild Animals), you have an essential part to play in fighting the trafficking and poaching of animals across the world, from lions, tigers, elephants, and rhinos to the many other species under threat for a multitude of reasons. The CMS is composed of 132 states, focusing on regions where the depletion of migratory animals is most pressing. In order to mitigate the trend of mass animal trafficking and poaching, the CMS has worked with NGOs, corporations, and the media to spread awareness and combat the threats of organized crime and the black market[2].

I. Preventing Exploitation of Land Mammals

Statement of the Issue:

The exploitation of land mammals has existed for generations. From the exploitation of ivory tusks of the mighty elephants, to the illegal hunting and trade of endangered species, these

[1] "CMS: Convention on Migratory Species," n.d.
[2] CMS, n.d.

practices have destroyed ecosystems across the world. More than just hurting the respective species, these reckless actions can disrupt the food chains of the most populated regions of the world, crippling their self-sufficiency. It is this problem that the Committee on Migratory Species (CMS) was formed to oversee[3]. Created in 1979, this organization was created to protect migratory species and urge conservation via cooperation across borders[4].

In an analysis of the transgressions surrounding mammal exploitation, the capture and trade of ivory stands out as unique. Ivory primarily comes from elephant tusks[5]. Elephant tusks are the most sought-after because of their large size[6]. Additionally, layers of ivory are added over time, rising over the previous layer[7]. To remove the tusks, poachers kill the elephant in the process. Due to an increasing demand for ivory, elephants have been targets of illegal hunting[8]. More than just elephants however, the broader exploitation of these land mammals has risen sharply in recent years. Part of this is driven by the economics of crime. Illicit wildlife trafficking is estimated to be worth between $7.8 and $10 billion per year.[9] When considering the issue on a much broader scale, the reality of how profitable this exploitation is cannot be ignored when drafting potential solutions. It is with this mind, that member states must work together to craft solutions to this issue. For while each nation may claim differing levels of involvement in land mammal migrations, they all can benefit from increased cooperation and collaboration.

History:

[3] *CMS | Convention on the Conservation of Migratory Species of Wild Animals*. (n.d.). https://www.cms.int/en
[4] CMS, n.d.
[5] Rosen, Rebecca J., "What Is It About an Elephant's Tusks That Make Them So Valuable?" *The Atlantic*. September 6, 2012. https://www.theatlantic.com/business/archive/2012/09/what-is-it-about-an-elephants-tusks-that-make-them-so-valuable/262021/.
[6] Rosen, 2012.
[7] Rosen, 2012.
[8] Linder, Ann. "Detailed Discussion of Elephants and the Ivory Trade." Michigan State University. 2016. https://www.animallaw.info/article/detailed-discussion-elephants-and-ivory-trade.
[9] ICE

Ivory, lion pelts, and other desired poached products have been used for luxury goods like jewelry or statutes as it symbolizes wealth and status. In numerous Asian nations, tigers have been poached for their pelts and for "bone strengthening wine", both of which are regarded as symbols of wealth and power.[10] Beyond these examples, millions of individual animals, representing thousands of species, are poached in their native habitats, either being killed, or captured.[11] Poaching means "the illegal hunting or capture of animals that are not one's own. In many cases, poaching involves killing animals with the intent to acquire their meat, horns, scales, or other body parts."[12] Nevertheless, there was a considerable increase in the 1970s due to the proliferation of assault rifles[13]. Approximately 100,000 elephants were poached yearly, and herds were reduced to 80 percent in many regions[14]. In the 1960s, there was an international discussion of regulating wildlife trade. The need for such debate was evident, as global trade is a business of billions of dollars at the detriment of plants and animals[15]. All of this led to the creation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which is an international agreement aimed at ensuring that international trade of wild animals and plants does not threaten the survival of the species[16]. In 1963, at a meeting of the World Conservation Union (IUCN), the representatives of 80 countries drafted the text of the Convention. It was not until 1975 that CITES came into force[17].

The CMS has established various Working Groups composed of representatives from member states and/or scientific experts in the field, which are focused on the plights of migratory birds and the effects of climate change on various animals. For example, the African-Eurasian Migratory Landbirds Action Plan (AEMLAP) was formed to improve the conservation status of

[10]Gunyap 2017
[11]Hall 2019
[12] International Fund for Animal Welfare. "What is poaching?" April 16, 2024. https://www.ifaw.org/international/journal/what-is-poaching.
[13] Hammer, Joshua. "The Race to Stop Africa's Elephant Poachers." *Smithsonian Magazine*. July 2014. https://www.smithsonianmag.com/science-nature/race-stop-africas-elephant-poachers-180951853/?no-ist.
[14] Hammer, 2014.
[15] *Wildlife Trafficking: Why battling this illicit trade is crucial*. (2024, December 12). ICE. https://www.ice.gov/features/wildlife
[16] CITES. "What is CITES?" Accessed August 28, 2024. https://cites.org/eng/disc/what.php.
[17] CITES, n.d.

migratory landbird species across the African-Eurasian region.[18] Their goal is to coordinate actions to develop a framework to conserve, restore and manage populations of landbirds and their habitats. These working groups seek to tackle the broader issues on a more regional and subject-specific level, to enable the most powerful outcome. CMS has conducted a range of actions to help endangered species, such as the Year of the Gorilla established in 2009 to aid another species in danger (though not directly from poaching)[19]. As the CMS looks to enact more sophisticated actions, cooperation and an emphasis on locality remains at the forefront of the solution.

Analysis:

International cooperation is necessary to regulate the cross-border trade in wild animals and plants to prevent the overexploitation of some species. CITES was created in accordance with these ideas. More than 40,000 species of plants and animals are now protected to varied degrees by it, whether traded as live specimens, fur coats, or dried herbs[20]. For example, the trade of live elephants is restricted under the CITES recommendations. Depending on the nation of origin of the animals, different trade restrictions apply to trading live elephants taken from the wild[21]. These 40,000 species are categorized into groups facing either immediate extinction, not currently facing extinction but may, or species for which other CITES parties are needed for controlling its trade.[22] A specific example of the first tier of species is the tiger, which has been banned from being bred for trade, and calls on Parties to implement measures to adjust their protocols to support the conservation of wild tigers.[23] However another key part of CITES is the

[18] "African-Eurasian Migratory Landbirds Action Plan (AEMLAP) Working Group | CMS" 2020
[19] CMS, n.d.
[20] CITES, n.d.
[21] Commission on Crime Prevention and Criminal Justice. 2023. "Strengthening the International Legal Framework for International Cooperation to Prevent and Combat Illicit Trafficking in Wildlife." Report. *Commission on Crime Prevention and Criminal Justice*. Vol. 23–23. https://www.unodc.org/documents/commissions/CCPCJ/CCPCJ_Sessions/CCPCJ_32/CRPs/ECN152023_CRP3_e.pdf.
[22] NOAA Fisheries 2020
[23] "14.69, 19.109, 18.100, 18.101, 18.102 (Rev. CoP19), 18.103 (Rev. CoP19), 18.105, 18.106 & 18.107 (Rev. CoP19) to 18.109 (Rev. CoP19) | CITES" 2025

cooperation amongst its members. CITES is legally binding on the Parties, meaning that States that adhere to the Convention must follow it[24]. However, it does not replace national laws. Instead, it provides a framework to be followed by each Party, empowering all countries to adopt their own domestic legislation to ensure its implementation[25]. This legislation sets a set of minimum standards for the international trade of species regulated by CITES. However, it is up to the Parties to enforce these provisions[26]. CITES, one of the conservation conventions with the largest membership, currently has 184 Parties, each with the power to make a difference through their national legislation[27].

CMS has utilized these partnerships with other organizations to accomplish their collective goals of preventing the illegal importation and trade of these endangered animals. Moreover, CMS has established crucial guidelines designed to be implemented across each nation, to enable more customizable solutions[28]. But while the exploitation of elephants has captivated news headlines around the world, they are but the tip of the iceberg for the broader land mammal exploitation. Addressing the issues of wildlife conservation and protection is no task for one country. A global approach to conservation must be taken to protect the remaining populations[29]. Many areas of concern regarding migratory species make this issue challenging. These include jurisdictions, poaching, illegal trade, lack of research, data collection, and sharing. Different countries have different things at stake but play a vital role nonetheless. All countries must combine their resources and research to conserve endangered species within their borders[30].

Geography plays a significant role in this issue—specifically, borders. For a variety of these species, borders do not serve as restrictions on their ecosystem and environments. Animals do not recognize national boundaries. Their main priorities are food, water, and shelter, and they often migrate to neighboring countries. With the proliferation of climate change, these migratory patterns have only been pushed to the extremes, necessitating more actions taken by the

[24] CITES, n.d.
[25] FWS, n.d.
[26] FWS, n.d.
[27] CITES, n.d.
[28] CMS, n.d.
[29] CCPCJ, 2023.
[30] CCPCJ, 2023.

governments. As more land is converted for human use, the extent and quality of endangered animals ranges and habitats continue to decline rapidly[31].

As for rhinos, more than 8,000 have been poached in just South Africa from 2010 to 2019, since rhino horns are valued more than gold on the black market. Rhino horns are valued at up to $100,000 per kilogram of ground up powder in China, where the powder from the keratin is dissolved in liquids for use in traditional medicines. In China and Vietnam, rhino horns are also used to represent status and for decoration. Hundreds of rhinos are poached every year, despite the best efforts of authorities and organizations[32].

Big cats like lions and tigers also face major threat due to poaching and trafficking, with over 3,000 tigers being seized from trafficking rings worldwide in the last 20 years, many of which were found in India, China, and Indonesia. They are particularly valued for their beautiful skins, which are sold as status symbols by criminal groups, many based in Vietnam[33]. There are even fewer lions left in the wild in Africa than there are elephants, due in large part to mass poaching in Mozambique. Lions are also sold to East Asia, and their bones are often removed to be sold in a legal trade of lion bones in South Africa. Lion carcasses as a whole can be worth several thousand dollars, and they can be captured by simple poisoning due to their scavenging nature[34].

States can more successfully handle the issues of habitat loss, poaching, and conflict between humans and wildlife when they work together. By combining knowledge, technology, and resources, governments can increase anti-poaching measures, implement more sustainable practices, and create more conservation programs. Information collection and sharing are vital to

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[31] "African Elephant Species Now Endangered And Critically Endangered IUCN Red List." IUCN, October 29, 2024. https://iucn.org/news/species/202103/african-elephant-species-now-endangered-and-critically-endangered-iucn-red-list.
[32] *Saving Africa's last rhinos*. (n.d.). Northwestern Magazine. https://magazine.northwestern.edu/features/saving-africas-last-rhinos/
[33] Jazeera, A. (2022, November 2). Illegal trade threatens endangered tigers, 150 seized a year. *Al Jazeera*. https://www.aljazeera.com/news/2022/11/1/illegal-trade-threatens-endangered-tigers-150-seized-a-year
[34] Carrington, D. (2021, October 29). Lion poaching: the brutal new threat to Africa's prides. *The Guardian*. https://www.theguardian.com/environment/2018/nov/05/lion-poaching-the-brutal-new-threat-to-africas-prides

achieving conservation goals. Publicly available databases offer detailed, all-inclusive resources that facilitate conservation tactics and decisions. Access to current and reliable data allows countries to track population trends, evaluate the success of conservation efforts, and spot new dangers across international borders. Information transparency allows for seamless collaboration between nations, institutions, and conservation organizations. Unified efforts make it feasible to respond to issues like poaching and habitat loss in a more organized and effective manner[35].

The International Union for Conservation of Nature (IUCN) created a "Red List" of threatened species in 1964. Since then, this list has evolved to account for all the species that are becoming endangered. Nations should constantly review this list to monitor the species' population status under their jurisdiction. The IUCN Red List is essential for members of this committee. It provides information about population size, range, trade/ hunting threats, habitat, and ecology. More importantly, the IUCN Red List is a powerful tool to influence, inform, and shape policy for animal conservation and the protection of their habitats. The recent classification of African elephants into forest and savannah species underscores the persistent pressures these animals face. This message stresses the urgent global need to end poaching and ensure sufficient suitable habitats remain long-term. The establishment of lists, such as the Red List, draws attention to the needs of threatened species and calls for government action[36].

Initiatives following these assessments have been successful. More supportive legislation promoting human-wildlife cooperation and anti-poaching measures have been passed. In the United States, the Endangered Species Act was passed in 1973, designed to recognize the natural heritage in the United States, and to reinforce the urgency of protecting its native plants and animals.[37] While some nations may lay claim to numerous protected species, other nations play a crucial role in their survival. As has been established, such animals do not exist within a national border, they traverse nations at ease. As such, what happens to one country can ripple to numerous others. The death of a species can have a trickle down effect, eroding food chains, livelihoods, and economies of tens of nations, and millions of lives.[38] The information from

[35] CCPCJ, 2023.
[36] IUCN, 2024.
[37] NOAA Fisheries 2022
[38] United Nations 2019

resources, such as the Red List, helps countries create the most effective and adaptable measures. Knowing specific details about species' range or habitat status allows for the most applicable policies to be made. Significant conservation efforts were only as quickly employed because of the increased pressures the Red List globally provided[39].

International frameworks and collaborative initiatives have proven effective in reducing the different threats that endangered species live with. With cooperation, countries and organizations have created strong agreements to protect the species from poaching, human-animal coexistence, and habitat loss. These collaborative projects and international frameworks have made a significant difference. In recent years, nations and groups have shared resources, knowledge, and technology that aim to be useful for everyone in this journey. These partnerships help to ensure that the protection and conservation strategies are effective. More importantly, they ensure that the combined efforts of the international community are focused on the preservation of the animals and their habitats.

Conclusion:

CMS has invested time and money in fighting the illegal trafficking and poaching of lions alone, working with groups like Wildlife Crime Prevention, Panthera, and Musekese Conservation to both combat poaching and foster rehabilitation for depleting lion numbers. For elephants, CMS has worked closely with CITES to combat poaching and other threats to the survival of this vital species, and created the African Elephant Fund and Action Plan for further efforts. The CMS has also made many efforts to raise awareness of and combat poaching of rhinos and tigers[40]. But beyond mere individual species, the CMS seeks to protect the thousands of species that inhabit this world, through effective collaboration and conservation efforts.

In these ways, the CMS is an essential appendage of the UN to combat any and all threats to many species across the world. This includes fighting the alarming rates of trafficking and poaching in certain land mammals. These acts profit from the lack of coordination amongst nations, which is precisely what the CMS seeks to emphasize. Ultimately, the actions these

[39] IUCN, 2024.
[40] CMS, n.d.

member states take can help to stave off extinction for the animals, and can protect not only these ecosystems, but ultimately, the broader survival of mankind itself.

Questions to Consider:

1. What are examples of notable wildlife that can be found in your country? What is its conservation status?
2. What is the range of this wildlife? Is it contained within your borders, or does it also live in other nations? Does it migrate across borders? How should you work with other countries to address this?
3. How has human activity impacted this wildlife? Is it influenced by foreign markets? How do your markets influence wildlife in other parts of the world?

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"CMS: Convention on Migratory Species." n.d. IMUNA | NHSMUN | Model UN. https://imuna.org/nhsmun/nyc/committees/cms-convention-migratory-species/.

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II. Conservation of River Ecosystems

Statement of the Issue:

River ecosystems are lifelines of biodiversity, supporting an intricate web of life that extends far beyond their waters. These ecosystems play a critical role in sustaining migratory species, providing vital habitats, breeding grounds, and migration corridors for countless mammals, birds, and fish. Yet, the health of rivers is increasingly threatened by pollution, dam construction, habitat degradation, and climate change, placing immense pressure on the migratory species that depend on them. Within this context, the Committee on Migratory Species (CMS) has emerged as a pivotal force in fostering international cooperation to safeguard river ecosystems. By addressing the transboundary nature of rivers and their migratory species, CMS enables collective action to protect these invaluable ecosystems, ensuring the continuity of ecological functions and the survival of species critical to global biodiversity.

History:

River ecosystems are vital for the survival of migratory species, providing essential resources and pathways that sustain their life cycles. These waterways act as natural corridors, connecting critical habitats for breeding, feeding, and resting. Species like the Eurasian otter and river dolphins rely on unbroken river systems to find food and shelter, while migratory fish such as salmon and sturgeon depend on these waterways to reach their spawning grounds. These fish, in turn, support entire food webs, including birds and mammals that depend on them. Unfortunately, human activities like dam construction and water diversion have fragmented these ecosystems, blocking migration routes and disrupting the balance of life they support[41]. The CMS plays a crucial role in addressing these challenges by promoting international cooperation to protect free-flowing rivers, restore damaged habitats, and reduce the impact of human development. Protecting river ecosystems not only supports migratory species but also ensures

[41] Sinclair, A. R. E., D. S. Hik, O. J. Schmitz, G. G. E. Scudder, D. H. Turpin, and N. C. Larter. "Biodiversity and the Need for Habitat Renewal." *Ecological Applications 5*, no. 3 (1995): 579–87. https://doi.org/10.2307/1941968

that rivers continue to provide critical services like clean water, flood control, and climate regulation, benefitting both wildlife and people[42].

More than just mediums of water, river ecosystems also support thriving environments for endemic plants and animals. Per the World Wildlife Fund, there are over 100,000 species that rely on freshwater systems such as lakes, rivers and wetlands for survival. Given the fact that this comprises a fraction of the broader river ecosystems, this number is bound to be a small part of the broader picture. It is important to also recognize that such river systems are in reality very distinct, but through an analysis of each circumstance we can grow to realize the broader solutions that can be applied to every nation, regardless of their location or concentration of water bodies[43].

Analysis:

The Amazon Basin, known for its extensive biodiversity, is a vital region for the global environment. Spanning eight countries and covering approximately 2.7 million square miles, the Amazon rainforest is home to an estimated 400 billion individual trees and about 16,000 different species. Habitat preservation in the Amazon is essential for maintaining a myriad of species and supporting unique species like the Amazon river dolphin. The conservation of such ecosystems plays a critical role in sustaining global biodiversity, mitigating climate change, and supporting the indigenous communities that have lived in these lands for centuries. Yet in recent decades, areas such as the Amazon River in Brazil and Colombia, there is immense evidence of declining populations amongst endemic species[44].

[42] United Nations Environmental Programme. "Protecting What Protects US: A Network of Conservation Areas in the Amazon." *UNEP*, October 21, 2016. https://www.unep.org/news-and-stories/story/protecting-what-protects-us-network-conservation-areas-amazon
[43] World Wildlife Fund. "Why a Global Declaration for River Dolphins Is so Critical." *WWF*, October 10, 2023. https://wwf.panda.org/wwf_news/?9843416%2FWhy-we-need-a-Global-Declaration-on-River-Dolphins
[44] Pilcher, Helen. "The Amazon rainforest: The wonders of Earth's most unexplored wilderness, explained." *BBC Science Focus Magazine,* July 21, 2023.https://www.sciencefocus.com/planet-earth/the-amazon-rainforest

To protect these animals, the United Nations Environmental Programme has encouraged an approach that integrates forest conservation with sustainable community development. Forest conservation refers to managing and protecting forest ecosystems to maintain their biodiversity. They aim to provide and conserve natural resources for people and the planet. This involves various activities and strategies to prevent deforestation, such as restoring degraded forests and ensuring that forest resources are conserved. Moreover, sustainable community development refers to the process of improving the quality of life within a community in ways that are feasible economically and environmentally for all, ensuring that the needs of the community are met. According to UNEP, this approach, accompanied by forest restoration, creates a balanced and resilient plan to protect endangered species[45].

Despite the efforts to protect these unique animals, challenges persist. Reports from the non-profit organization Sea Shepherd note ongoing threats to river dolphins, including direct human interference such as harpooning. Harpooning is a traditional method of fishing large animals, where a fisherman shoots a long aluminum or wooden stick to capture the animal. This common method is still widely used by fishermen in the Amazon, as 96 percent of caught river dolphins were found with marks and scars from the harpoons. However, this technique is hazardous for endangered species, reducing its already small population. Global initiatives like the CMS support the end of threatening techniques like harpooning, aiming to protect the Amazon's biodiversity. However, to end unsustainable practices, there must be global commitment. It is imminent that the international community promotes international agreements and action plans that mitigate the impacts of human activities on migratory species like the Amazon river dolphin[46].

Another powerful example of the need for reform is the river system in the Nile, which is over 4,000 miles in length. Home to numerous species of animals, the region has seen severe exploitation, chiefly from the excessive usage of the water resources by the countries that inhabit it. Specifically, there have been concerns about water scarcity onset due to the creation of large-

[45] UNEP, 2016

[46] Sea Shepherd. “Endangered Dolphins Discovered Dead with Possible Harpoon Injuries during Scientific Expedition in the Amazon.” *Sea Shepherd Global*, December 14, 2021. https://www.seashepherdglobal.org/latest-news/dolphins-dead-amazon/

scale dams, irrigation projects, and the pollution created as a byproduct. The Aswan High Dam, constructed in 1970, was designed to generate hydroelectric power, which fueled Egypt's economic growth. However as a result of this reaction, there have been numerous impacts on the environment. These include the displacement of local communities and irrevocable changes to the natural ecosystem, specifically through holding back silt deposits in the river basin, which has resulted in erosion, and increased the usage of chemical fertilizers. To prevent this from occurring in the future, environmental groups and researchers continuously interior the ecological impact of the dam, to ensure that there are no serious impacts to animal populations, and shoreline erosion. Nations outside of this region can use this as an example of easy to create universal guidelines to prevent the erosion of their environments, through partnering and implementing CMS and other organizations' guidelines for monitoring[47].

Another crucial method of preserving ecosystems is the communities that are local to the region. Community engagement is essential to building sustainable infrastructure in the areas. It is cooperating with individuals, groups, or organizations within a community to address specific issues, like habitat preservation. It actively involves community members in decision-making, planning, and implementing initiatives that affect them. This method ensures that their voices are heard and their needs are met.

Local communities play a crucial role in preserving biodiversity, as local involvement in infrastructure projects will ensure the protection of local species while aiding the social and economic needs of the community. Their involvement creates a sense of ownership and empowerment in protecting their territory, ensuring the initiatives align with their communities' needs. This leads to greater community support and long-term commitment to projects. By actively participating, local communities ensure that sustainable projects are effective and resilient to change, as they are likely to be maintained and adapted over time.

For example, organizations like the Trent Rivers Trust in the United Kingdom work not just to restore river ecosystems, but to connect the river to the community. One of their numerous endeavors is to build infrastructure, such as riverside walkways, that allow people to more easily

[47]World Rivers Day | Fourth Sunday in September, www.nationaldaycalendar.com/international/world-rivers-day-fourth-sunday-in-september. Accessed 9 Dec. 2024.

access the river and make it a part of their lives. This builds a sense of connection between the communities and the river, helping more people to care about the state of their local ecosystem. Furthermore, it creates opportunities for volunteers and citizen scientists to monitor river health, and take action when issues arise.[48]

Across numerous of these regions, one export has remained a constant factor affecting these resources: oil. Oil has long been a key contributor to the global economy, powering industries, transportation, and even entire nations. As the most widely traded commodity in the world, oil's significance in modern life is unique to global human society. Every day, billions of people worldwide rely on oil to fuel automobiles, ships, and aircraft, making up every aspect of daily life and global commerce[49]. In many parts of the world, the oil industry serves as a foundation of economic development, with more than 7.5 million barrels of oil produced per day. The profit from oil exports is a cornerstone to the economic stability of numerous countries, funding state budgets and driving national growth[50].

Understanding the different types of oil is crucial to grasp the magnitude of this industry. Crude oil is a naturally extracted fossil fuel from the earth refined into various products, such as gasoline, diesel, jet fuel, and other chemicals. Crude oil can range from light to heavy grades, which determine its viability, price, and usability. The most common types of crude oil are ones that contain higher amounts of sulfur, thus better to produce gasoline. Additionally, refined oil products are the results of processing crude oil and are what power vehicles, heat homes, and are used to fuel other industries[51].

The impact of oil on marine environments is severe. When oil is released into the ocean or rivers, it spreads rapidly, forming a thick layer of toxic oil on the water's surface. This layer is dense enough to block sunlight, inhibiting marine plants' survival. Plants and phytoplankton

[48] Trent Rivers Trust. "What We Do". https://www.trentriverstrust.org/what-we-do/
[49] Oliveira Bredariol, Tomás and McGlade, Christophe. "Tracking Oil and Natural Gas Supply." *International Energy Agency,* July 11, 2023. https://www.iea.org/energy-system/fossil-fuels
[50] Ferragut, Pablo. "Oil & gas production in Central & South America: Investment needed to meet rising regional demand." *International Ssociation of Oil and Gas Producers,* March 2018. https://www.iogp.org/bookstore/product/global-energy-brief-latin-america/
[51] U.S. Energy Information Administration. "Oil and petroleum products explained." *Independent Statistics and Analysis,* August 1, 2022.https://www.eia.gov/energyexplained/oil-and-petroleum-products/oil-and-the-environment.php

make up the base of aquatic food chains, and if disrupted, can severely damage the food intake of millions of other species. Moreover, oil also coats birds' feathers that catch prey in the water. The oil on their feathers reduces their ability to protect themselves from cold, causes them to drown, and poisons them when they ingest the oil as they clean themselves. Fish also absorb oil toxins, threatening humans who eat the fish. On nearby land, oil spills can cause soil to be toxic and infertile. Soil contaminated by oil can no longer support agriculture, leading to the erosion of biodiversity and life in affected areas. The harmful chemicals in oil can also seep into groundwater, contaminating drinking water supplies globally. In regions where agriculture is the primary livelihood, contamination can ruin food production and the stability of the community, leading to poverty and displacement[52].

Furthermore, oil production is a substantial contributor to greenhouse gas emissions, with the industry accounting for approximately 15 percent of global carbon dioxide emissions. This is equivalent to 5.1 billion tonnes of greenhouse gas emissions each year. Greenhouse gases are expelled not only by oil extraction but also by exploring, drilling, refining, and transporting oil around the world. The refining process is a significant source of greenhouse gasses, as refineries release large amounts of carbon dioxide, methane, and other pollutants into the atmosphere. These toxic pollutants seep into all living organisms, causing numerous health challenges. Worsening air quality has proven to lead to respiratory and cardiovascular problems among people and animals, proving its inherent damage to local populations.[53]

In Argentina, thousands of protestors gathered in January 2022 to protest offshore oil exploration in Mar del Plata. The project was authorized to begin a new wave of oil drilling in deep waters, posing possible extreme ecological risks. Not only that, the project would dent many international and local efforts to protect the natural resources of the region. Beyond the fear of facing possible oil spills, many environmental activists expressed concerns for the biodiversity that would be impacted by the project–including whales, dolphins, penguins, and

[52] Barron, Mace G, Vivian, Deborah N, Heintz, Ron A, Yim, Un Hyuk. "Long-Term Ecological Impacts from Oil Spills: Comparison of Exxon Valdez, Hebei Spirit, and Deepwater Horizon." *Environ Sci Technol,* June 2020.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7397809/
[53] World Bank. "Global Gas Flaring Tracker Report." *The World Bank Group,* June 2024.https://thedocs.worldbank.org/en/doc/d01b4aebd8a10513c0e341de5e1f652e-0400072024/original/Global-Gas-Flaring-Tracker-Report-June-20-2024.pdf

other marine species. The impact could be irreversible and destroy several local fishing industries that rely heavily on marine resources for their livelihood[54].

These developments across the world indicate a broader awakening for environmental issues. The intensifying impacts of climate change–from severe droughts to increased wildfires–have prompted a shift in people's priorities, pushing communities to take stronger stances on environmental protection. Regardless, change is only possible if governments actively support these efforts. By collaborating with local communities to prioritize local sustainable practices, it can be possible to protect both natural resources and aquatic life.

Conclusion:

The existence of international groups that can work to protect these delicate environments. The UNEP's solution of combining forest conservation with community development can be applied to regions across the world. There are an estimated 165 major rivers in the world, with roughly half being over 1,000 miles long. It is clear that this concept of conservation has ample room to be applied internationally, with enormous repercussions if not addressed. The Amazon Basin can hence be used as a case study to the dangers and opportunities for conservation, with the ability to modify solutions to their specific regions. Because while nations may be unique in their region and climate, they all share the need to find common solutions to conserve their crucial ecosystems.

Questions To Consider:

1. How should nations balance economic growth through projects like dams and oil extraction with the responsibility to protect shared river ecosystems?
2. What commitments should nations make to ensure international organizations like CMS effectively address threats to rivers and biodiversity?

[54] Alcoba, Natalie. "Argentinian activists fight against offshore drilling plans." *Aljazeera*, March 11, 2022. https://www.aljazeera.com/news/2022/3/11/argentine-activists-fight-against-offshore-drilling-plans

3. How can nations empower local communities to contribute to conservation efforts while maintaining international standards for river protection?
4. Should nations adopt universal conservation policies, or should strategies be specific to each nation’s specific river ecosystem and challenges?

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